Advanced Master's Degree
Clinical Nutrition

tech global university

tech global university

Advanced Master's Degree
Clinical Nutrition

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Global University**
- Accreditation: **120 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/nutrition/advanced-master-degree/advanced-master-degree-clinical-nutrition**

Index

01

Introduction

Clinical Nutrition is a multidisciplinary field that addresses the relationship between nutrition and health, with a specific focus on the treatment and prevention of diseases through diet optimization. Therefore, it helps to manage medical conditions such as obesity, diabetes or cardiovascular diseases, and also to improve the quality of life of patients, strengthening their immune system, promoting wound healing and optimizing organ function. That is why highly qualified professionals in this field are increasingly in demand. In response to this need, TECH has created this program of the highest quality, with a broad and complete course, and a faculty of the highest scientific and teaching level.

Through this 100% online Advanced Master's Degree in Clinical Nutrition, you will acquire the essential skills to evaluate, diagnose and design personalized nutritional treatment plans"

Clinical Nutrition is a fundamental field in the promotion of health and the treatment of various diseases. In fact, by providing personalized care, which is tailored to the specific needs of each individual, it helps to prevent and control conditions such as diabetes, obesity, cardiovascular diseases and cancer, among others.

In this context, TECH has implemented this Advanced Master's Degree, a solid specialization in the latest trends and advances in Human Nutrition, both in the field of health and in pathological situations. Therefore, the program will update the nutritionist's knowledge in aspects such as Genomic and Precision Nutrition, understanding the relationship between genetics and individual response to Nutrition, as well as its application in clinical practice to promote health and prevent diseases.

Likewise, work strategies based on the integral approach to the patient will be promoted, considering not only the symptomatology of the pathology in question, but also the interaction with the Human Microbiota. In fact, the understanding of the latter will be deepened, given its growing importance in health, as well as its involvement in non-digestive and autoimmune pathologies and in the regulation of the immune system.

Finally, the most common syndromes and symptoms related to nutritional problems will be examined, preparing professionals for an effective management of daily nutrition and the promotion of healthy habits. Ultimately, it is a complete and updated vision of Clinical Nutrition, equipping graduates with advanced and innovative knowledge to address the nutritional needs of patients in a comprehensive and effective manner.

Therefore, this 100% online Advanced Master's Degree will provide students with the facility of being able to study it comfortably, anywhere and at any time, based on the revolutionary Relearning methodology, a pioneer in TECH. They will also have access to a group of unique Masterclasses, designed by experts of wide international recognition for their research career in Clinical Nutrition, Genomics and Human Microbiota.

This **Advanced Master's Degree in Clinical Nutrition** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts in Clinical Nutrition
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning.
- Special emphasis on innovative methodologies in Clinical Nutrition
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

TECH brings you an exclusive set of Masterclasses, taught by Guest Directors with high specialization and international renown in fields such as Nutrition and Intestinal Microbiota"

With a comprehensive approach, which considers both diet and other relevant factors, you will be updated in Clinical Nutrition, a powerful tool to improve the health and wellbeing of people at all stages of their lives"

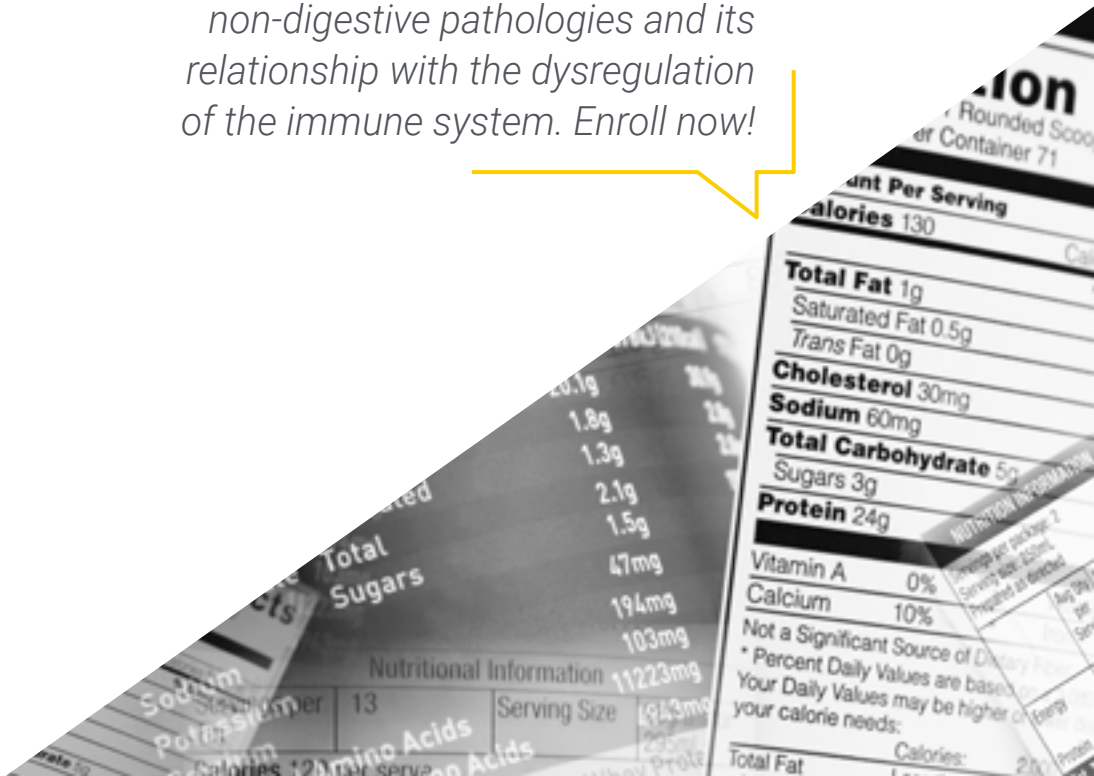
You will deepen in human population genetics and in Genomic and Precision Nutrition, obtaining the necessary tools for its application in your daily clinical practice. What are you waiting for to enroll?

You will analyze new concepts and trends in the Human Microbiota, highlighting its importance in various non-digestive pathologies and its relationship with the dysregulation of the immune system. Enroll now!

It includes in its teaching staff professionals belonging to the field of Clinical Nutrition, who pour into this program the experience of their work, in addition to recognized specialists from reference societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

The objectives of this Advanced Master's Degree are multiple and are designed to provide students with a comprehensive and specialized qualification in the field of nutrition applied to clinical care. These programs seek to update and deepen the knowledge of health professionals in the latest trends and advances in human nutrition, both in health contexts and in pathological situations. In addition, they seek to promote work strategies based on the practical knowledge of new trends in nutrition, encouraging the application of this knowledge in the design of personalized treatment plans for patients of all ages.

The objectives of this university program will focus on developing your skills to evaluate the individual response to Nutrition and to understand Genomic and Precision Nutrition"

General Objectives

- Update the nutritionist's knowledge on new trends in human nutrition, in both health and pathological situations
- Promote work strategies based on the practical knowledge of the new trends in nutrition and their application to child and adult pathologies
- Acquire theoretical knowledge of human population genetics
- Know Genomic and Precision Nutrition in order to be able to apply them in clinical practice, including their trajectory and the key studies that contributed to their development
- Know in which pathologies and conditions of human life Genomic and Precision Nutrition can be applied
- Evaluate the individual response to Nutrition and dietary patterns in order to promote health and disease prevention
- Analyze new concepts and future trends in the field of Genomic and Precision Nutrition
- Tailor personalized dietary and lifestyle habits according to genetic polymorphisms
- Offer a complete and wide vision of the current situation in the area of Human Microbiota, in its broadest sense
- Argue how the microbiota and its interaction with many non-digestive pathologies of an autoimmune nature, or its relationship with the deregulation of the immune system and the prevention of diseases, are currently being given a privileged position
- Promote work strategies based on the integral approach of the patient as a reference model, not only focusing on the symptomatology of the specific pathology, but also on its interaction with the microbiota and how it may be influencing it
- Incorporate advanced and innovative knowledge in food and nutrition into clinical practice
- Revise the fundamental aspects of healthy eating, with a current approach aimed at risk prevention
- Delve into the correct management of daily nutrition
- Examine the most common syndromes and symptoms related to nutritional problems

Thanks to the best didactic materials, at the forefront of technology and education, you will be prepared to effectively address the complexities of nutritional health in your clinical practice"

Specific Objectives

Module 1. New Developments in Food

- Review the basics of a balanced diet in the different stages of the life cycle, as well as in exercise
- Assess and calculate nutritional requirements in health and disease at any stage of the life cycle
- Review the new dietary guidelines, nutritional objectives, and recommended dietary allowances (RDA)
- Manage food databases and composition tables
- Acquire skills in reading and understanding new food labeling methods
- Update the drug-nutrient interaction and its implication in the patient's treatment
- Incorporate the possibilities of phytotherapy as an adjuvant treatment in clinical practice

Module 2. Current Trends in Nutrition

- Review the new dietary guidelines, nutritional objectives, and recommended dietary allowances (RDA)
- Explain the proper reading of new food labeling
- Incorporate phytotherapy as a coadjuvant treatment in clinical practice
- Identify and classify foods, food products, and food ingredients
- Review current trends in premature infant nutrition
- Explain the latest evidence on food allergies and intolerances

Module 3. Nutrigenetics I
- Acquire the latest knowledge on population genetics
- Understand how the basis for the interaction between Genetic Variability and Diet is generated
- Introducing the advanced Circadian Control System and Central and Peripheral Clocks

Module 4. Nutrigenetics II. Key Polymorphisms
- Present the key polymorphisms to date related to human nutrition and metabolic processes that the health practitioner needs to learn.
- Analyze the key studies that support these polymorphisms and the debate, where it exists

Module 5. Nutrigenetics III
- Present the Key Polymorphisms to date related to Complex Diseases that depend on Nutritional Habits
- Introduce new Advanced Concepts in Nutrigenetic Research

Module 6. Nutrigenomics
- Deepen in the Differences between Nutrigenetics and Nutrigenomics
- Present and analyze genes related to metabolic processes affected by Nutrition

Module 7. Metabolomics-Proteomics
- Know the Principles of Metabolomics and Proteomics
- Delve into the Microbiota as a Tool for Preventive and Personalized Nutrition

Module 8. Laboratory Techniques for Nutritional Genomics
- Understand the techniques used in Nutritional Genomics Studies
- Acquire the latest advances in omics and bioinformatics techniques

Module 9. Epigenetics
- Explore the fundamentals of the relationship between epigenetics and nutrition
- Present and analyze how MicroRNAs are involved in Nutritional Genomics

Module 10. The Relationship between Intolerances/Allergies and the Microbiota
- Know how a negative modulation in the microbiota can favor the appearance of food intolerances and allergies
- Delve into Microbiota changes in patients with food exclusion diets such as gluten

Module 11. Nutrition in Overweight, Obesity and their Comorbidities
- Adequate assessment of the clinical case, interpretation of causes of overweight and obesity, comorbidities and risks
- Calculate and individually prescribe the different models of hypocaloric diets
- Plan consultations and multidisciplinary team in obesity

Module 12. Nutrition in Digestive Tract Pathologies
- Know the different oral alterations, as well as the Esophagogastric Alterations
- Address nutrition in post-surgical syndromes
- Study common food allergies and intolerances with gastrointestinal impact

Module 13. Nutrition in Endocrine-Metabolic Diseases
- Explore the etiology, nutrigenetics and nutrigenomics of obesity
- Delve into the advances in Diabetes Mellitus and hypertension
- Know the most effective endoscopic and surgical treatments for Endocrine-Metabolic Diseases
- Update knowledge on dieting and obesity

Module 14. Nutrition in Nervous System Pathologies

- Update on the scientific evidence of the relationship between nervous system pathologies and nutrition
- Assess the patient's needs and difficulties, in addition to an adequate assessment of the nutritional status
- Learn the main psychological aspects of patients with alterations of behavioral disorders

Module 15. Nutrition in Kidney Diseases

- Explore glomerular conditions and tubulopathies
- In-depth study of chronic renal insufficiencies
- Investigate the underlying pathophysiological mechanisms of Kidney Diseases
- Develop and implement strategies for prevention and early management of Chronic Renal Failure

Module 16. Nutrition in Special Situations

- Explore nutrition in the context of Metabolic Stress
- Broaden knowledge regarding the treatment of oncology patients
- Know the role of Nutrition in immune-mediated diseases

Module 17. Clinical Nutrition and Hospital Dietetics

- Delve into the management of hospital Nutrition units
- Distinguish the different basal and therapeutic diets used in hospital settings
- Study the interaction between drugs and nutrients

Module 18. Artificial Nutrition in Adults

- Distinguish enteral and parenteral nutrition with their main characteristics
- Know the advances in home artificial Nutrition
- Improve the nutritional status and quality of life of patients through different types of Nutrition
- Establish updated protocols for the prescription and follow-up of Nutrition
- Optimize nutritional care for patients

Module 19. Physiology of Infant Nutrition

- Update the drug-nutrient interaction and its implication in the patient's treatment
- Identify the relationship between nutrition and immune status
- Define the fundamental of Nutrigenetics and Nutrigenomics
- Review the psychological bases and biopsychosocial factors that affect human eating behavior
- Explain the relationship of physiology and Nutrition in the different stages of infant development
- Describe the main malabsorption syndromes and how they are treated

Module 20. Artificial Nutrition in Pediatrics

- Perform nutritional assessment in Pediatrics
- Reflect on the role of human milk as a functional food
- Describe new formulas used in infant feeding
- Incorporate the different techniques and products of basic and advanced nutritional support related to pediatric nutrition into clinical practice
- Evaluate and monitor the supervision of children on nutritional support

Module 21. Infant Malnutrition

- Predict patients' nutritional risk
- Early detection and evaluation of quantitative and qualitative deviations from the nutritional balance due to excess or deficiency
- Identify children at nutritional risk who are eligible for specific support
- Identify children suffering from malnutrition
- Describe the correct nutritional support for a malnourished child
- Classify the different types of malnutrition and their impact on the developing organism
- Identify the appropriate nutritional therapy for pediatric patients with chronic pulmonary pathology

Module 22. Childhood Nutrition and Pathologies

- Analyze the implications of nutrition in the growth process and in the prevention and treatment of different childhood pathologies
- Explain current trends in the nutrition of infants with delayed intrauterine growth and the implication of nutrition on metabolic diseases
- Reflect on the etiology, repercussions, and treatment of childhood obesity
- Explain the nutritional treatment of the most common deficiency diseases in our environment
- Define the role that fats play in children's diets
- Assess the psychological and physiological aspects involved in eating disorders in young children
- Review the pathogenesis and update the treatment of inborn errors of metabolism
- Identify exclusion foods in the diets of children with celiac disease
- Identify dietary factors related to bone metabolism
- Explain managing children with gastroesophageal reflux
- Describe the main malabsorption syndromes and how they are treated

Module 23. Childhood Nutrition and Pathologies

- Identify the repercussion that a pregnant and lactating mother's nutrition has on the intrauterine growth and evolution of new-borns and infants
- Describe the nutritional requirements in the different periods of childhood
- Calculate child and adolescent athlete dietary needs and risks
- Reflect on new trends and models in infant feeding
- Reflect and identify risk factors in school and adolescent nutrition
- Identify eating behavior disorders
- Explain the treatment of dyslipidemias and the role that nutrition plays in their genesis and treatment
- Manage diabetic children's diet
- Assess the nutritional support of children with cancer in different situations
- Reflect on the role of nutrition in autistic children
- Review the rationale for dietary support of acute diarrhea
- Describe the management of nutritional support in inflammatory diseases
- Reflect on the relationship between constipation and infant nutrition
- Define the dietary management of children with nephropathy
- Review the dietary management of oral cavity pathologies in children
- Explain the implications that nutrition can have in the treatment of liver diseases

Module 24. Sports Nutrition

- Evaluate and prescribe physical activity as a factor involved in nutritional status
- Study the latest developments in exercise physiology
- Emphasize the importance of good hydration in all sports disciplines
- Treat common eating disorders in sports such as vigorexia, orthorexia or anorexia

Module 25. Assessment of Nutritional Status and Calculation of Personalized Nutritional Plans, Recommendations and Monitoring

- Adequate assessment of the clinical case, interpretation of causes and risks
- Personalized calculation of nutritional plans taking into account all individual variables
- Planning nutritional plans and models for a complete and practical recommendation

Module 26. Nutritional Consultation

- Review the psychological bases and biopsychosocial factors that affect human eating behavior
- Acquire teamwork skills as a unit in which professionals and other personnel related to the diagnostic evaluation and treatment of dietetics and nutrition are structured in a uni or multidisciplinary and interdisciplinary way
- Know the basics of marketing, market research and clients that a nutritional practice should manage
- Delve into the techniques of interviewing and dietary counseling for the patient

Module 27. Probiotics, Prebiotics, Microbiota, and Health

- Delve into probiotics, their definition, history, mechanisms of action
- Delve into prebiotics, their definition, types of prebiotics, and mechanisms of action
- Know the clinical applications of probiotics and prebiotics in Gastroenterology
- Know the Clinical Applications of Endocrinology and Cardiovascular Disorders
- Understand the clinical applications of probiotics and prebiotics in Urology
- Understand the clinical applications of probiotics and prebiotics in Gynecology
- Know the clinical applications of Probiotics and prebiotics in Immunology: Autoimmunity, Pneumology, Dermatology, Vaccines
- Know the clinical applications of probiotics and prebiotics in nutritional diseases
- Know the clinical applications of probiotics and prebiotics in neurological diseases, mental health, and elderly
- Understand the clinical applications of Probiotics and Prebiotics in critically ill cancer patients
- Understand the use of dairy products as a natural source of Probiotics and Prebiotics
- Delve into the safety and legislation in the use of Probiotics

Module 28. Nutrition for Health, Equity and Sustainability

- Analyze the scientific evidence regarding the impact of food on the environment
- Learn about current legislation in the food industry and consumption
- Assess the health effects derived from the current food model and the consumption of ultra-processed food

03

Skills

This high quality academic program will provide nutritionists with specialized and advanced competencies in food and nutrition applied to clinical care. Therefore, these competencies will include the assessment and diagnosis of the individual nutritional needs of patients, designing personalized treatment plans based on updated scientific evidence. In addition, professionals will acquire practical skills to apply work strategies based on new trends in Nutrition, integrating genomic and precision approaches to optimize health and prevent diseases.

You will develop the essential competencies to address syndromes and symptoms related to common nutritional problems, as well as to incorporate advanced knowledge on healthy eating and daily dietary management"

General Skills

- Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader contexts
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner
- Conduct individual reflective work on new nutrigenetics and Precision Nutrition data
- Study and evaluate current controversial issues on this subject
- Evaluate and use in clinical practice commercially available tools for Nutritional Genomics and Precision Nutrition
- Perform comprehensive nutritional assessments that take into account the psychological, social and pathological aspects of the patient
- Adapt dietary plans to the most recent advances in Diet Therapy
- Apply diets and dietary therapy planning to the field of prevention, clinic and education

Specific Skills

- Design a dietary plan of phytotherapy as an adjuvant treatment.
- Interpret all data in the nutritional assessment of the patient
- Develop food hygiene practices based on current legislation
- Design dietary treatment for oral cavity pathologies in adults with special attention to sensory disorders and mucositis
- Indicate treatment for managing patients with swallowing problems
- Determine the role of the intestinal microbiota and its implications in diseases
- Apply the different techniques and products of basic and advanced nutritional support related to patient nutrition
- Distinguish dietary management of patients with debilitating neuromuscular pathology and cerebrovascular accidents
- Analyze the importance of nutrition in childhood growth processes
- Determine how to calculate the dietary needs and risks of child and adolescent athletes
- Design an assessment and monitoring plan for children with nutritional support
- Analyze the differences between probiotic and prebiotic foods and their application in the infant stage
- Develop correct nutritional support for malnourished children
- Address the psychological and physiological aspects involved in eating disorders in young children

- Determine the correct dietary management of diabetic and oncological children at different stages of the disease
- Determine the calculation of the nutritional needs and risks of children and adolescent athletes in order to guarantee adequate growth and development
- Design an evaluation and monitoring plan for children on nutritional support to determine their adequacy
- Analyze the differences between probiotic and prebiotic foods in order to determine their application in the infant stage
- Develop a correct nutritional support for the malnourished child in order to reverse this situation and avoid later complications
- Address the psychological and physiological aspects involved in eating disorders in young children
- Apply critical, logical and scientific thinking to nutritional recommendations
- Acquire the latest advances in nutritional research
- Integrate knowledge and deal with the complexity of data, evaluate relevant literature to incorporate scientific advances into your own professional field
- Deepen in the analysis of different types of studies in genetic epidemiology in order to be able to perform an adequate interpretation of the articles published in this field
- Update and broaden the knowledge of students with special training and interest in Probiotic Therapy, Prebiotic Therapy and the latest advances in this field
- Detect the patient's nutritional risks and needs from a holistic point of view
- Perform dietary planning and assess psychological and quality of life aspects with adapted dietary recommendations
- Plan nutritional treatment based on scientific evidence in pathologies of the digestive system
- Apply dietary measures to improve symptoms and quality of life
- Create a flexible and personalized nutritional plan according to the patient's own demands

Get up to date with TECH!" You will provide comprehensive, high quality Nutritional care, therefore contributing to the well-being and health of patients, through an extensive library of innovative multimedia resources"

04

Course Management

The lecturers behind this Advanced Master's Degree are highly qualified and experienced experts in various fields related to Nutrition and Health. In fact, these professionals have been selected by TECH due to their academic excellence as well as their practical experience in clinical care and research in Nutrition. Therefore, their diverse specialization and experience will allow them to offer a comprehensive and up-to-date perspective on topics such as Clinical Nutrition, Genetics, Sports Nutrition, Gut Microbiota and other relevant fields. In addition, these mentors are committed to quality teaching and professional development of graduates.

The commitment and experience of the faculty of this Advanced Master's Degree will guarantee you a first class specialization, preparing you to face the complex and constantly evolving challenges of the field of Clinical Nutrition"

International Guest Director

Lara Al-Dandachi is one of the few r**egistered dietitians** in California, and the rest of the United States, to hold a triple certification in Diabetes Care **specialty CDES,** Advanced **Diabetes** Management **BC-ADM** and in **Obesity** with Subspecialty Weight Management (CSOWM). Her work as a clinical nutritionist has led her to lead projects such as UCLA Health's Gonda Diabetes Prevention Program, which has received **special recognition** from the **Center for Disease Control and Prevention** (CDC) and has allowed her to work with multiple cohorts.

In addition, she coordinates the **Obesity Reduction Program** (PRO) as **Director of Nutrition**. From that group, she is in charge of developing and updating the professional curriculum for overweight education **in adults and adolescents,** as well as training new dietitians. In all of these settings, she counsels her patients on how to improve their lifestyle by incorporating **healthy eating** habits, **increased physical activity** and the fundamentals of **Integrative Medicine.**

At the same time, Al-Dandachi continually seeks to stay at the forefront of **clinical research** in Nutrition. She has attended the **Harvard Blackburn** Course **in Obesity Medicine** twice. In those participations, she has received the Certificate of Training in Pediatric and Adult Obesity through the **Commission on Dietetic Registration** (CDR), the accrediting agency of the **American Academy of Nutrition and Dietetics.**

Also, her mastery of this healthcare field allows her to provide **personalized care t**o patients with rare conditions such as latent **Autoimmune Diabetes** in adulthood. She has also worked in her **Public Health** internship as a volunteer, collaborating with **underprivileged populations** in initiatives for HIV education and prevention, the *Head Start program* , among others.

Ms. Al-Dandachi, Lara

- Nutrition Director of the Obesity Reduction Program at UCLA Health, California, United States
- Clinical Dietitian with CareMore Health Plan
- Director of Nutrition at Hollywood Presbyterian Medical Center
- Clinical Dietitian at Sodexho Health Care Services
- Clinical Dietitian at Beverly Hospital
- Master's Degree in Public Health at Loma Linda University
- Bachelor of Science in Nutrition Science and Dietetics at the American University of Beirut

Thanks to TECH, you will be able to learn with the best professionals in the world"

International Guest Director

Dr. Sumantra Ray is an internationally recognized specialist in Nutrition and his main areas of interest are Nutrition Education in Health Systems and Cardiovascular Disease Prevention. With his outstanding experience in this health field, he has served as a consultant on special assignment for the Nutrition Directorate of the World Health Organization Headquarters in Geneva. He has also worked as Director of Research in Food Security, Health and Society in the Faculty of Humanities and Social Sciences at the University of Cambridge.

For his constant commitment to the dissemination of healthy eating habits,he has received the Josephine Lansdell Award from the British Medical Association. Specifically, this recognition highlighted his contributions related to nutrition and Cardiovascular Prevention.. Also, as an international expert, he has participated in a program of work on Food, Nutrition and Education in India, led by Cambridge University and funded by the UK Global Challenges Research Fund.

Dr. Sumantra Ray's studies are worldwide references, focusing on global food security, as it is a fundamental aspect for the development of societies. In addition, his leadership skills have been demonstrated as a Senior Clinical Scientistat the Medical Research Council, focusing on Nutrition and Vascular Healthstudies. In this position, he directed an experimental medicine facility dedicated to Human Nutritionstudies.

Throughout his career he has authored more than 200 scientific publications and has written the Oxford Handbook of Clinical and Health Research, aimed at strengthening the basic research skills of health care personnel worldwide. In this regard, he has shared his scientific findings in numerous lectures and conferences, in which he has participated in different countries.

Dr. Ray, Sumantra

- Executive Director and Founder at NNEdPro Global Nutrition and Health Center, Cambridge, UK
- Director of Research in Food Security, Health and Society at the Faculty of Humanities and Social Sciences, Cambridge University
- Co-Founder and President of the BMJ Scientific Journal Nutrition, Prevention and Health
- Presidential Advisor to the School of Advanced Studies in Food and Nutrition from the University of Parma
- Vice President of the Conference of Medical Academic Representatives of the BMA
- Consultant on special assignment to the Nutrition Directorate of the World Health Organization Headquarters in Geneva
- Honorary International Dean of the Cordia Colleges in India
- Senior Clinical Scientist with the Medical Research Council
- Degree in Medicine

Thanks to TECH you will be able to learn with the best professionals in the world"

International Guest Director

Dr. Caroline Stokes is a specialist in Psychology and Nutrition, with a PhD and a qualification in Medical Nutrition. After a distinguished career in this field, he leads the Food and Health Research at the Humboldt University of Berlin. This team collaborates with the Department of Molecular Toxicology at the German Institute of Human Nutrition Potsdam-Rehbrücke. Previously, she has worked at the Medical School of Saarland University in Germany, the Cambridge Medical Research Council and the UK National Health Service.

One of her goals is to find out more about the fundamental role that Nutrition plays in improving the overall health of the population. To this end, she has focused on elucidating the effects of fat-soluble vitamins
of fat-soluble vitamins such as A, D, E and K, the Amino Acid Methionine, lipids such as omega-3 fatty acids and probiotics in both the prevention and treatment of diseases, particularly those related to hepatology, neuropsychiatry and aging.

Her other lines of research have focused on plant-based diets for the prevention and treatment of diseases, including liver and psychiatric diseases. She has also studied the spectrum of vitamin D metabolites in health and disease. She has also participated in projects to analyze new sources of vitamin D in plants and to compare the luminal and mucosal microbiome.

In addition, Dr. Caroline Stokes has published a long list of scientific papers.
Some of her areas of expertise are Weight Loss, Microbiota and Probiotics, among others. The outstanding results of her research and her constant commitment to her work have led to her winning the National Health Service Journal Award for the Nutrition and Mental Health Program in the UK.

Dr. Stokes, Caroline

- Head of the Food and Health Research Group at the Humboldt University of Berlin, Germany
- Researcher at the German Institute of Human Nutrition, Potsdam-Rehbruecke, Germany
- Professor of Food and Health at the Humboldt University of Berlin
- Scientist in Clinical Nutrition at the University of Saarland
- Nutrition Consultant at Pfizer
- PhD in Nutrition at the University of Saarland
- Postgraduate Diploma in Dietetics at King's College London, University of London
- Master's Degree in Human Nutrition from the University of Sheffield

Thanks to this university program, 100% online, you will be able to combine your studies with your daily obligations, under the guidance of the leading international experts in the field of your interest. Enroll now!"

International Guest Director

Harry Sokol, M.D. is internationally recognized in the field of Gastroenterology for his research on Intestinal Microbiota. With more than 2 decades of experience, he has established himself as a true scientific authority thanks to his numerous studies on the role of microorganisms in the human body and their impact on chronic inflammatory bowel diseases. In particular, his work has revolutionized medical understanding of this organ, often referred to as the "second brain".

Among Dr. Sokol's contributions, he and his team have opened a new line of advances on the bacterium Faecalibacterium prausnitzii In turn, these studies have led to crucial discoveries about its anti-inflammatory effects, opening the door to revolutionary treatments.

In addition, the expert is distinguished by his commitment to the dissemination of knowledge, whether by teaching academic programs at the Sorbonne University or by publishing works such as the comic book The Extraordinary Powers of the Belly. His scientific publications appear continuously in world-renowned journals and he is invited to specialized congresses.. At the same time, he carries out his clinical work at the Saint-Antoine Hospital (AP-HP/University Hospital Federation IMPEC/Sorbonne University), one of the most renowned hospitals in Europe

In addition, Dr. Sokol began his medical studies at the Paris Cité University, showing early on a strong interest in health research. A chance meeting with the eminent Professor Philippe Marteau led him to Gastroenterology and the enigmas of the Intestinal Microbiota. Throughout his career, he also broadened his horizons by specializing in the United States, at Harvard University, where he shared experiences with leading scientists. Upon his return to France, he founded his own team where he investigates Fecal Transplantation, offering state-of-the-art therapeutic innovations.

Dr. Sokol, Harry

- Director of Microbiota, Gut and Inflammation at Sorbonne University, Paris, France
- Specialist Physician at the Gastroenterology Department of the Saint-Antoine Hospital (AP-HP), Paris, France
- Group Leader at the Institut Micalis (INRA)
- Coordinator of the Center of Microbiome Medicine of Paris FHU
- Founder of the pharmaceutical company Exeliom Biosciences (Nextbiotix)
- President of the Fecal Microbiota Transplantation Group
- Medical Specialist in different hospitals in Paris
- PhD in Microbiology at the Université Paris-Sud
- Postdoctoral stay at the Massachusetts General Hospital, Harvard University Medical School
- Degree in Medicine, Hepatology and Gastroenterology at Université Paris Cité

Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"

Guest Directors

Dr. Sánchez Romero, María Isabel

- Area Specialist in the Microbiology Department of the Puerta de Hierro Majadahonda University Hospital, Madrid
- PhD in Medicine and Surgery by the University of Salamanca
- Medical Specialist in Clinical Microbiology and Parasitology
- Member of the Spanish Society of Infectious Diseases and Clinical Microbiology
- Technical Secretary of the Madrid Society of Clinical Microbiology

Dr. Portero, María Francisca

- Acting Head of the Microbiology Service at the Puerta de Hierro Majadahonda University Hospital
- Specialist in Microbiology and Clinical Parasitology at the Puerta de Hierro University Hospital
- Doctorate in Medicine from the Autonomous University Madrid
- Postgraduate in Clinical Management by Gaspar Casal Foundation
- Research stay at the Presbyterian Hospital of Pittsburg through a FISS scholarship

Dr. Alarcón Cavero, Teresa

- Biologist Specialist in Microbiology, Princesa University Hospital
- Head of Group 52 of the Research Institute of the La Princesa Hospital
- Degree in Biological Sciences with a major in Fundamental Biology from the Complutense University of Madrid
- Master's Degree in Medical Microbiology from the Complutense University of Madrid

Dr. Muñoz Algarra, María

- Head of Patient Safety at the Microbiology Department of the Puerta de Hierro Majadahonda University Hospital
- Area Specialist in the Microbiology Department of the Puerta de Hierro Majadahonda University Hospital, Madrid
- Collaborator Department of Preventive Medicine and Public Health and Microbiology Autonomous University of Madrid
- Doctorate in Pharmacy from the Complutense University of Madrid

Dr. López Dosil, Marcos

- Area Specialist in Microbiology and Parasitology at San Carlos Clinical University Hospital
- Specialist Physician of the Microbiology and Parasitology Department of the Hospital de Móstoles
- Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- Master's Degree in Tropical and Health Medicine from the Autonomous University of Madrid
- Expert in Tropical Medicine from the Autonomous University Madrid

Anel Pedroche, Jorge

- Specialist in Microbiology Service of the Puerta de Hierro Majadahonda University Hospital
- Degree in Pharmacy from the Complutense University of Madrid
- Course in Interactive Sessions on Hospital Antibiotherapy by MSD
- Updating course on infection in hematologic patients by Puerta del Hierro Hospital
- Attendance at the XXII Congress of the Spanish Society of Infectious Diseases and Clinical Microbiology

Management

Dr. Aunión Lavarías, María Eugenia

- Pharmacist Clinical Nutrition Expert
- Author of the reference book in the field of Clinical Nutrition, Dietary Management of Overweight in the Pharmacy Office (Editorial Médica Panamericana)
- Pharmacist with extensive experience in the public and private sector
- Head Pharmacist
- Assistant Pharmacist. Pharmacy Chain. British Health and Beauty Retailers Boots UK. Oxford Street Central London
- Bachelor 's Degree in Food Science and Technology. University of Valencia
- Direction of the Dermocosmetic University Course. Pharmacy Office

Dr. Konstantinidou, Valentini

- Dietitian-Nutritionist Specialist in Nutrigenetics and Nutrigenomics
- Founder of DNANutricoach
- Creator of the Food Coaching method to change eating habits.
- Lecturer in Nutrigenetics
- PhD in Biomedicine
- Dietitian- Nutritionist
- Food Technologist
- Accredited Life Coach of the British body IPAC&M
- Member of: American Society for Nutrition

Ms. Fernández Montalvo, María Ángeles

- Head of Naintmed- Integrative Nutrition and Medicine
- Director of the Master's Degree in Human Microbiota at CEU University
- Parapharmacy Manager, Nutrition and Natural Medicine professional at Natural Life Parapharmacy
- Degree in Biochemistry from the University of Valencia
- Diploma in Natural and Orthomolecular Medicine
- Postgraduate in Food, Nutrition and Cancer: prevention and treatment
- Master's Degree in Integrative Medicine from CEU University
- Specialist Degree in Nutrition, Dietetics and Diet Therapy
- Expert in Vegetarian, Clinical, and Sports Nutrition
- Expert in the current use of Nutricosmetics and Nutraceuticals in general

Dr. Vázquez Martínez, Clotilde

- Corporate Head in the University Hospital Endocrinology and Nutrition Departments, Fundación Jiménez Díaz
- Head of the Endocrinology and Nutrition Service at Ramón y Cajal University Hospital
- Head of the Endocrinology and Nutrition Service at Severo Ochoa University Hospital
- President of The Society of Endocrinology, Nutrition, and Diabetes of the Community of Madrid SENDIMAD ()
- Coordinator Therapeutic Education Group Group of the Spanish Society of Diabetes
- Doctor of the Faculty of Medicine of the Autonomous University of Madrid.
- Degree in Medicine and Surgery from the Faculty of Medicine of the University of Valencia
- Specialist in Endocrinology and Nutrition via Medical Residency by the University Hospital Fundación Jimenez Díaz
- Abraham García Almansa Clinical Nutrition Lifetime Achievement Award
- Recognized among the 100 best Doctors in Spain according to Forbes list
- Castilla - La Mancha Diabetes Foundation (FUCAMDI) Diabetes and Nutrition Lifetime Achievement Award

Dr. Sánchez Jiménez, Álvaro

- Specialist in Nutrition and Endocrinology at Jiménez Díaz Foundation University Hospital
- Nutritionist at Medicadiet
- Clinical Nutritionist specialized in Prevention and Treatment of Obesity, Diabetes and their Comorbidities
- Nutritionist in the Predimed Plus Study
- Nutritionist at Eroski
- Nutritionist at Axis Clinic
- Professor of the Master's Degree in Obesity and Comorbidities at the Rey Juan Carlos University
- Professor at the Course of Excellence in Obesity at the University Hospital Fundación Jimenez Díaz
- Graduate in Human Nutrition and Dietetics from the Complutense University of Madrid.
- Nutrition and Food for the Elderly by the Complutense University of Madrid
- Nutrition and Sports for Professionals by the Fundación Tripartita
- Refresher Course on Practical Diabetes Type 1 and 2 for Health Professionals

Dr. Montoya Álvarez, Teresa

- Head of the Endocrinology and Nutrition Service of the Infanta Elena University Hospital
- Head of Volunteering at the Garrigou Foundation
- Graduate in Medicine and Surgery from the University of Navarra
- Master's Degree in Obesity and its Comorbidities: Prevention, Diagnosis and Integral Treatment at the University Rey Juan Carlos
- Course in Bariatric Antecedents of Surgery Patient Emergencies: Key References for the Attending Physician
- Member of: Institute for Health Research Foundation Jiménez Díaz, Health Commission of FEAPS Madrid, Trisomy 21 Research Society

Professors

Mr. Anglada, Roger

- Research Support Technician at the Genomics Service of UPF
- Senior Research Support Technician at the Genomics Service of Pompeu Fabra University.
- Senior Technician in Analysis and Control. Narcís Monturiol HSI, Barcelona
- Co-author of Different scientific publications
- Graduate in Multimedia, Catalunya Open University

Ms. Bueno García, Eva

- Predoctoral researcher in Immunosenescence at the Immunology Service of the Central University Hospital of Asturias (HUCA)
- Degree in Biology from the University of Oviedo
- Master's Degree in Biomedicine and Molecular Oncology from the University of Oviedo
- Molecular biology and immunology courses

Ms. Manso del Real, Paula

- Nursing Supervisor of the Dialysis Unit of the Íñigo Álvarez de Toledo Renal Foundation
- Nephrology Nurse at the Nephrology Unit of the Jiménez Díaz Foundation University Hospital
- Diploma in Nursing at the Francisco de Vitoria University
- Degree in International Cooperation and Health Promotion at the Francisco de Vitoria University
- Degree in International Cooperation and Health Promotion at the Francisco de Vitoria University
- Master's Degree in Hemodialysis for Nursing at the Complutense University of Madrid

Dr. Alonso Arias, Rebeca

- Director of the Immunosenescence research group of the HUCA Immunology Service
- Specialist Immunology Physician at the Central University Hospital of Asturias
- Numerous publications in international scientific journals
- Research work on the association between the microbiota and the immune system
- 1st National Award for Research in Sports Medicine, 2 occasions

Dr. García Santamarina, Sarela

- Group Leader at the Institute of Chemical and Biological Technology of the New University of Lisbon
- Marie Curie EIPOD Postdoctoral Researcher for: Effects of Drugs on Intestinal Flora, at the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany
- Postdoctoral Researcher for: Mechanisms of Copper Homeostasis in the Interaction between the Fungal Pathogen Cryptococcus Neoformans and the Host, Duke University USA.
- PhD in Biomedicine Research from the Pompeu Fabra University of Barcelona
- Degree in Chemistry with a major in Organic Chemistry, University of Santiago of Compostela
- Master's Degree in Molecular Biology of Infectious Diseases from the London School of Hygiene & Tropical Medicine in London
- Master's Degree in Biochemistry and Molecular Biology, Autonomous University of Barcelona

Ms. López Martínez, Rocío

- Physician in the area of Immunology at the Vall d'Hebron Hospital
- Internal Biologist in Immunology at Central University Hospital of Asturias.
- Master in Biostatistics and Bioinformatics, Universidad Oberta of Catalunya

Dr. Uberos, José

- Head of section in the Neonatology area of the San Cecilio Clinical Hospital of Granada
- Specialist in Pediatrics and Child Care
- Associate Professor of Pediatrics, University of Granada
- Vocal Bioethics Research Committee of the Province of Granada (Spain)
- Coeditor of the Signs and Symptoms Journal
- Professor Antonio Galdo Award. Society of Pediatrics of Eastern Andalucía
- Editor of the Journal of the Pediatric Society of Eastern Andalusia (Bol. SPAO)
- Doctor of Medicine and Surgery.
- Degree in Medicine from the University of Santiago de Compostela
- Member of the Board of the Pediatric Society of Eastern Andalusia.

Dr. Verdú López, Patricia

- Medical Specialist in Allergology at the Beata María Ana Hospital of Hermanas Hospitalarias
- Physician specializing in Allergology at Inmunomet Health and Integral Wellness Center
- Research physician in Allergology at San Carlos Hospital
- Specialist in Allergology at the University Hospital Dr. Negrín in Las Palmas of Gran Canaria
- Degree in Medicine from the University of Oviedo
- Master's Degree in Aesthetics and Antiaging Medicine at the Complutense University of Madrid

Ms. Rodríguez Fernández, Carolina

- Biotechnology Researcher at Adknoma Health Research
- Master in Clinical Trials Monitoring by ESAME Pharmaceutical Business School.
- Master's Degree in Food Biotechnology from the University of Oviedo
- University Expert in Digital Teaching in Medicine and Health by CEU Cardenal Herrera University

Dr. Gonzalez Rodríguez, Silvia Pilar

- Deputy Medical Director, Research Coordinator and Clinical Chief of the Menopause and Osteoporosis Unit at Gabinete Médico Velázquez
- Specialist in Gynecology and Obstetrics at HM Gabinete Velázquez
- Medical Expert at Bypass Comunicación en Salud, SL
- Key Opinion Leader of several international pharmaceutical laboratories
- Doctor in Medicine and Surgery from the University of Alcalá de Henares, specializing in Gynecology
- Specialist in Mastology by the Autonomous University of Madrid
- Master's Degree in Sexual Orientation and Therapy from the Sexological Society of Madrid
- Master's Degree in Climacteric and Menopause from the International Menopause Society
- Postgraduate Diploma in Epidemiology and New Applied Technologies from the UNED (Spanish Distance Learning University)
- University Diploma in Research Methodology from the Foundation for the Training of the Medical Association and the National School of Health of the Carlos III Health Institute.

Dr. Rioseras de Bustos, Beatriz

- Microbiologist and renowned researcher
- Resident in immunology at HUCA
- Member of the Biotechnology of Nutraceuticals and Bioactive Compounds Research Group (Bionuc) of the University of Oviedo.
- Member of the Microbiology Area of the Department of Functional Biology.
- Residency in the Southern Denmark University
- Doctorate in Microbiology from the University of Oviedo.
- Master's Degree in Research in Neuroscience by the University of Oviedo

Dr. Lombó Burgos, Felipe

- PhD in Biology
- Head of the BIONUC Research Group, University of Oviedo.
- Former Director of the Research Support Area of the AEI Project.
- Member of the Microbiology Area of the University of Oviedo.
- Co-author of the research *Biocidal nanoporous membranes with inhibitory activity of biofilm formation at critical points in the production process of the dairy industry.*
- Head of the study on 100% natural acorn-fed ham against inflammatory bowel diseases
- Speaker III Congress of Industrial Microbiology and Microbial Biotechnology

Dr. Álvarez García, Verónica
- Assistant Physician of the Digestive Area at the Río Hortega University Hospital.
- Specialist in Digestive System at the Central Hospital of Asturias
- Speaker at the XLVII Congress SCLECARTO
- Degree in Medicine and Surgery
- Digestive System Specialist

Dr. Gabaldon Estevani, Toni
- IRB and BSC senior group leader
- Co-founder and Scientific Advisor (CSO) of Microomics SL
- ICREA Research Professor and Group Leader of the Comparative Genomics Laboratory
- Doctor of Medical Sciences, Radbout University Nijmegen.
- Corresponding Member of the Royal National Academy of Pharmacy of Spain.
- Member of the Spanish Young Academy

Dr. Modroño Móstoles, Naiara
- Doctor Specialist in Pediatric Endocrinology and Nutrition at the University Hospital Fundación Jimenez Diaz
- Doctor Specialist in Endocrinology the Infanta Elena University Hospital.
- Doctor Specialist in Endocrinology at the University Hospital of Getafe
- Author of various articles published in scientific journals
- Postgraduate Certificate in Treatment of Diabetes Mellitus Type 2 at the Autonomous University of Barcelona

Dr. Fernández Madera, Juan Jesus
- Allergologist at HUCA
- Former Head of the Allergology Unit, Monte Naranco Hospital, Oviedo.
- Allergology Service, Central University Hospital of Asturias.
- Member of: Board of Directors of Alergonorte, Scientific Committee of Rhinoconjunctivitis of the SEAIC and Advisory Committee of Medicinatv.com

Dr. Méndez García, Celia
- Biomedical Researcher at Novartis Laboratories in Boston, USA.
- Doctorate in Microbiology from the University of Oviedo.
- Member of the North American Society for Microbiology.

Dr. Narbona López, Eduardo
- Speciality Neonatal Unit, San Cecilio University Hospital
- Advisor to the Department of Pediatrics, University of Granada.
- Member of: Pediatric Society of Western Andalusia and Extremadura, Andalusian Association of Primary Care Pediatrics.

Dr. López Vázquez, Antonio
- Area Specialist in Immunology, Central University Hospital of Asturias, Spain.
- Collaborator of the Carlos III Health Institute
- Advisor of Aspen Medical
- Doctor of Medicine, University of Oviedo.

Dr. Losa Domínguez, Fernando

- Gynecologist at the Sagrada Familia Clinic of HM Hospitals
- Doctor in private practice in Obstetrics and Gynecology in Barcelona.
- Expert in Gynecoesthetics by the Autonomous University of Barcelona.
- Member of: Spanish Association for the Study of Menopause, Spanish Society of Phytotherapeutic Gynecology, Spanish Society of Obstetrics and Gynecology and Board of the Menopause Section of the Catalan Society of Obstetrics and Gynecology

Dr. López López, Aranzazu

- Specialist in Biological Sciences Researcher
- Researcher at Fisabio Foundation
- Assistant Researcher at the University of the Balearic Islands
- PhD in Biological Sciences from the University of the Balearic Islands.

Dr. Suárez Rodríguez, Marta

- Gynecologist specialized in Senology and Breast Pathology
- Researcher and University Professor
- PhD in Medicine and Surgery from the Complutense University of Madrid.
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Master's Degree in Senology and Breast Pathology from the Autonomous University of Barcelona

Mr. Martínez Martínez, Alberto

- Clinical Nutritionist of Endocrinology and Nutrition Department of the university Rey Juan Carlos Hospital.
- Dietitian responsible for the menu of children with food allergy. Gastronomic
- Dietician- Clinical Nutritionist at the University Hospital Antonio
- Degree in Human Nutrition and Dietetics. Fluminense Federal University
- Graduate in Human Nutrition and Dietetics at the University of Valencia.
- Master's Degree in Agri-environmental and Agri-food Sciences. Autonomous University of Madrid

Dr. Fernández Menéndez, Amanda

- Doctor Specialist in Pediatric Endocrinology and Nutrition at the Jiménez Díaz Foundation University Hospital
- Specialist in Pediatrics, Doctor Castroviejo Health Center (SERMAS)
- Attending physician specializing in Pediatric Endocrinology and Nutrition at La Paz University Hospital
- International Cooperation in Health and Development in India (development of health projects in the field)
- Degree in Medicine and Surgery from the Autonomous University of Madrid.
- Master's Degree in Obesity and its Comorbidities: Prevention, Diagnosis and Integral Treatment at the University Rey Juan Carlos
- Expert in Clinical Bioethics from the Complutense University

Dr. Núñez Sanz, Ana

- Dietician and nutritionist, expert in pregnancy, breastfeeding and infancy.
- López-Nava Obesity Nutritionist.
- Nutritionist at Medicadiet
- *Freelance* Dietitian and nutritionist
- Dietitian and nutritionist at Menudiet SL
- Contributor on food and nutrition in Castilla La Mancha Television.
- Promoter of talks and workshops on healthy eating for kindergartens, schools and companies.
- Graduate in Human Nutrition and Dietetics at the Complutense University of Madrid.
- Master's Degree in Nutrition and Health at the Open Official of Catalonia.

Dr. González Toledo, Beatriz María

- Nephrology Nurse Unit of the Fundación Jiménez Díaz Hospital
- Nurse Director of Dialysis at the Íñigo Álvarez de Toledo Renal Foundation
- Master's Degree in Hemodialysis for Nurses at the Complutense University of Madrid
- Master's Degree in Nutrition and Health at the Open University of Catalonia.
- Univerity Expert in Peritoneal Dialysis for Nursing at Cardenal Herrera University.
- Graduate in Nursing from the Autonomous University of Madrid.

Dr. Prieto Moreno, Ana

- Nutritionist in the Department of Endocrinology and Nutrition at University Hospital Fundación Jiménez
- Nutritionist at the General Hospital of Villalba
- Nutritionist at the Infanta Elena University Hospital
- Nutritionist in the Superior Sports Council
- Nutritionist at the WWF
- Nutritionist at Medicadiet
- Nutritionist at anitas Sociedad Anónima de Seguros
- Nutritionist at La Paz University Hospital
- Nutritionist at Fundación Mapfre
- Nutritionist at Copernal Publishing
- Nutritionist at Revista Diabetes
- Master's Degree in Obesity and its Comorbidities, Prevention Strategies, Diagnosis and Integral Treatment at the University of Alcalá
- Master's Degree in Physical Anthropology, Human Evolution and Biodiversity at the Complutense University of Madrid
- Degree in Human Nutrition and Dietetics at the Autonomous University of Madrid

Dr. Gutiérrez Pernia, Belén

- Obesity Nutritionist at Medicadiet
- López-Nava Obesity Nutritionist Madrid
- Dietitian and Nutritionist in Research Projects of Predimed Plus
- Grade in Human Nutrition and Dietetics from the Autonomous University of Madrid
- Master's Degree in Clinical Nutrition and Endocrinology at the Institute of Nutrition and Health Sciences.

Ms. Yela Salguero, Clara

- Dietitian Coordination of Clinical Trials
- Dietician at the Jiménez Díaz Foundation Hospital
- Clinical Trials Coordinator at the Ramón y Cajal Hospital
- Dietitian at the Severo Ochoa Hospital, in Leganés
- Dietitian in the Integral Obesity Treatment Unit at the San José Hospital in Madrid
- Diploma in Human Nutrition and Dietetics at Alfonso X El Sabio University
- Degree in Food Science and Technology at the Complutense University of Madrid

Dr. Sanz Martínez, Enrique

- Clinical Nutritionist at the University Hospital General de Villalba and Rey Juan Carlos University Hospital
- Dietitian in the project PLUS researcher in the Health Research Institute of the Jiménez Diaz Foundation
- Researcher and collaborator in the NUTRICOVID study
- Researcher and collaborator in the cross-sectional prospective OBESTIGMA study
- Graduate in Human Nutrition and Dietetics at the Complutense University of Madrid
- Master's Degree in Clinical Nutrition at the Catholic University of San Antonio in Murcia
- Master's Degree in Obesity and its Comorbidities: Prevention, Diagnosis and Integral Treatment at the University Rey Juan Carlos

Dr. Hoyas Rodríguez, Irene

- Specialist in Endocrinology and Nutrition
- Specialist in Endocrinology and Nutrition at the Fundación Jiménez Díaz and Infanta Elena Hospitals
- Specialist in Endocrinology and Nutrition at the Beata María Ana Hospital
- Specialist in Endocrinology at the University Hospital 12 de Octubre
- Degree in Medicine from the Complutense University of Madrid
- Postgraduate course in Treatment of Diabetes Mellitus Type 2 at the Autonomous University of Barcelona

Ms. López Escudero, Leticia

- Nutritionist at Diet Clinic
- Dietician and clinical nutritionist at the Jiménez Díaz Foundation University Hospital
- Dietician and Clinical Nutritionist at the University Hospital Infanta Elena
- Professor in graduate studies Degree in Human Nutrition and Dietetics
- Graduate in Human Nutrition and Dietetics at the Complutense University of Madrid
- Master's Degree in Obesity and its Comorbidities: Prevention, Diagnosis and Integral Treatment at the University Rey Juan Carlos
- Master's Degree in Nutrition in Physical Activity and Sport, Open University of Catalunya (UOC)

Dr. Alcarria Águila, María del Mar

- Clinical Nutritionist at Medicadiet
- Clinical Obesity Nutritionist López-Nava
- Dietitian and Nutritionist in Predimed-Plus
- Grade in Human Nutrition and Dietetics from the Complutense University of Madrid
- Master's Degree in Sports Nutrition and Training from the Institute of Nutrition and Health Sciences (ICNS)

Ms. Labeira Candel, Paula

- Clinical nutritionist in the Bariatric Endoscopy Unit at HM Hospitales
- Sports and clinical nutritionist at the Clinical Institute of Overweight and Obesity
- Nutritionist Sports and Clinical at Medicadiet, Slimming & Nutrition
- Sports Nutritionist at the CF TrivalValderas de Alcorcón
- Food and water quality analyst in the Andalusian Health Service
- Diploma in Human Nutrition and Dietetics at the Pablo Olavide University of Seville
- Bachelor 's Degree in Food Science and Technology
- Diploma in Human Nutrition and Dietetics
- Master's Degree in Sports Training and Nutrition at the European University of Madrid

Dr. Miguélez González, María

- Attending Physician of Endocrinology and Nutrition at the University Hospital Jiménez Díaz Foundation. of Madrid
- Degree in Medicine from the University of Valladolid
- Teaching collaborator in seminars given to students at the Complutense University of Madrid
- Professor of the Master Expert in Obesity and Metabolic Complications, endorsed by SEEDO

05

Structure and Content

This Advanced Master's Degree in Clinical Nutrition will cover a wide range of content, designed to provide nutritionists with an in-depth and up-to-date understanding of the relationship between food and health. Yes, topics ranging from nutritional assessment and the design of personalized treatment plans to the application of Genomic and Precision Nutrition in clinical practice will be covered. In addition, advanced concepts related to gut Microbiota, individual response to diet and common nutritional syndromes will be explored.

Do you want to update your knowledge in Clinical Nutrition? With this program you will gain knowledge in human genetics, sports nutrition, and psychological and sociocultural aspects of nutrition"

Module 1. New Developments in Food

1.1. Molecular Foundations of Nutrition
1.2. Update on Food Composition
1.3. Food Composition Tables and Nutritional Databases
1.4. Phytochemicals and Non-Nutritive Compounds
1.5. New Food
  1.5.1. Functional Nutrients and Bioactive Compounds
  1.5.2. Probiotics, Prebiotics, and Symbiotics
  1.5.3. Quality and Design
1.6. Organic Food
1.7. Transgenic Foods
1.8. Water as a Nutrient
1.9. Food Safety
  1.9.1. Physical, Chemical, and Microbiological Hazards
1.10. Phytotherapy Applied to Nutritional Pathologies

Module 2. Current Trends in Nutrition

2.1. Nutrigenetics
2.2. Nutrigenomics
  2.2.1. Fundamentals
  2.2.2. Methods
2.3. Immunonutrition
  2.3.1. Nutrition-Immunity Interactions
  2.3.2. Antioxidants and Immune Function
2.4. Physiological Regulation of Feeding. Appetite and Satiety
2.5. Psychology and Nutrition
2.6. Nutrition and the Circadian System. Timing is the Key
2.7. Update on Nutritional Objectives and Recommended Intakes
2.8. New Evidence on the Mediterranean Diet

Module 3. Nutrigenetics I

3.1. Nutrigenetics Authorities and Organizations
  3.1.1. NUGO
  3.1.2. ISNN
  3.1.3. Evaluation Committees
3.2. GWAS I Studies
3.2.1. Population Genetics - Design and Use
  3.2.2. Hardy-Weinberg Law
  3.2.3. Linkage Imbalance
3.3. GWAS II
  3.3.1. Allelic and Genotypic Frequencies
  3.3.2. Gene-Disease Association Studies
  3.3.3. Association Models (Dominant, Recessive, Co-dominant)
  3.3.4. Genetic Scores
3.4. The Discovery of Nutrition-Related SNPs
  3.4.1. Key Studies-Design
  3.4.2. Main Results
3.5. The Discovery of SNPs Associated with Nutrition-Related Diseases (*Diet-Depended*)
  3.5.1. Cardiovascular Diseases.
  3.5.2. Diabetes Mellitus Type II
  3.5.3. Metabolic Syndrome
3.6. Main Obesity-Related GWAS
  3.6.1. Strengths and Weaknesses
  3.6.2. The FTO Example
3.7. Circadian Control of Intake
  3.7.1. Gut-Brain Axis
  3.7.2. Molecular and Neurological Basis of the Brain-Gut Connection
3.8. Chronobiology and Nutrition
  3.8.1. Central Clock
  3.8.2. Peripheral Clocks
  3.8.3. Circadian Rhythm Hormones
  3.8.4. Intake Control (Leptin and Ghrelin)

3.9. SNPs Related to Circadian Rhythms
- 3.9.1. Regulatory Mechanisms of Satiety
- 3.9.2. Hormones and Intake Control
- 3.9.3. Possible Pathways Involved

Module 4. Nutrigenetics II Key Polymorphisms

4.1. Obesity-Related SNPs
- 4.1.1. The Tale of the Obese Monkey
- 4.1.2. Appetite Hormones
- 4.1.3. Thermogenesis

4.2. Vitamin-Related SNPs
- 4.2.1. Vitamin D
- 4.2.2. B Complex Vitamins
- 4.2.3. Vitamin E

4.3. Exercise-Related SNPs
- 4.3.1. Strength vs. Competition
- 4.3.2. Sports Performance
- 4.3.3. Injury Prevention/Recovery

4.4. Oxidative Stress/Detoxification-related SNPs
- 4.4.1. Genes Encoding Enzymes
- 4.4.2. Anti-Inflammatory Processes
- 4.4.3. Phase I+II of Detoxification

4.5. SNP related to Addictions
- 4.5.1. Caffeine
- 4.5.2. Alcohol
- 4.5.3. Salt

4.7. SNP Related to Flavor
- 4.7.1. Sweet Taste
- 4.7.2. Salty Taste
- 4.7.3. Bitter Taste
- 4.7.4. Acid Taste

4.8. SNP vs. Allergies vs. Intolerances
  4.8.1. Lactose
  4.8.2. Gluten
  4.8.3. Fructose
4.9. PESA Study

Module 5. Nutrigenetics III

5.1. SNPs Predisposing to Complex Nutrition-Related Diseases -- Genetic Risk Scores (GRS)
5.2. Type II Diabetes
5.3. Hypertension
5.4. Arteriosclerosis
5.5. Hyperlipidemia
5.6. Cancer
5.7. The Exposome Concept
5.8. Metabolic Flexibility Concept
5.9. Current Studies-Challenges for the Future

Module 6. Nutrigenomics

6.1. Differences and Similarities with Nutrigenetics
6.2. Bioactive Components of Diet on Gene Expression
6.3. The Effect of Micro and Macronutrients on Gene Expression
6.4. The Effect of Dietary Patterns on Gene Expression
  6.4.1. The Mediterranean Diet Example
6.5. Main Studies in Gene Expression
6.6. Genes Related to Inflammation
6.7. Genes Related to Insulin Sensitivity
6.8. Genes related to Lipid Metabolism and Adipose Tissue Differentiation
6.9. Genes Related to Arteriosclerosis
6.10. Genes Related to the Myosceletal System

Module 7. Metabolomics-Proteomics

7.1. Proteomics
- 7.1.1. Principles of Proteomics
- 7.1.2. The Flow of Proteomics Analysis

7.2. Metabolomics
- 7.2.1. Principles of Metabolomics
- 7.2.2. Targeted Metabolomics
- 7.2.3. Non-Targeted Metabolomics

7.3. The Microbiome/Microbiota
- 7.3.1. Microbiome Data
- 7.3.2. Human Microbiota Composition
- 7.3.3. Enterotypes and Diet

7.4. Main Metabolomic Profiles
- 7.4.1. Application to Disease Diagnosis
- 7.4.2. Microbiota and Metabolic Syndrome
- 7.4.3. Microbiota and Cardiovascular Diseases Effect of the Oral and Intestinal Microbiota

7.5. Microbiota and Neurodegenerative Diseases
- 7.5.1. Alzheimer's Disease
- 7.5.2. Parkinson's Disease
- 7.5.3. ALS

7.6. Microbiota and Neuropsychiatric Diseases
- 7.6.1. Schizophrenia
- 7.6.2. Anxiety, Depression, Autism

7.7. Microbiota and Obesity
- 7.7.1. Enterotypes
- 7.7.2. Current Studies and State of Knowledge

Module 8. Epigenetics

8.1. History of Epigenetics. The Way I Feed Myself, a Legacy for my Grandchildren
8.2. Epigenetics vs. Epigenomics
8.3. Methylation
  8.3.1. Examples of Folate and Choline, Genistein
  8.3.2. Examples of Zinc, Selenium, Vitamin A, Protein Restriction
8.4. Histone Modification
  8.4.1. Examples of Butyrate, Isothiocyanates, Folate and Choline
  8.4.2. Examples of Retinoic Acid, Protein Restriction
8.5. MicroRNA
  8.5.1. Biogenesis of MicroRNAs in Humans
  8.5.2. Mechanisms of Action-Regulating Processes
8.6. Nutrimiromics
  8.6.1. Diet-Modulated MicroRNAs
  8.6.2. MicroRNAs involved in Metabolism
8.7. Role of MicroRNAs in Diseases
  8.7.1. MicroRNA in Tumorogenesis
  8.7.2. MicroRNAs in Obesity, Diabetes and Cardiovascular Diseases
8.8. Gene Variants that Generate or Destroy Binding Sites for MicroRNAs
  8.8.1. Main Studies
  8.8.2. Results in Human Diseases
8.9. MicroRNA Detection and Purification Methods
  8.9.1. Circulating MicroRNAs
  8.9.2. Basic Methods Used

Module 9. Laboratory Techniques for Nutritional Genomics

9.1. Molecular Biology Laboratory
  9.1.1. Basic Instructions
  9.1.2. Basic Material
  9.1.3. Accreditations Required in the U.S.
9.2. DNA Extraction
  9.2.1. From Saliva
  9.2.2. From Blood
  9.2.3. From Other Fabrics
9.3. Real-Time PCR
  9.3.1. Introduction - History of the Method
  9.3.2. Basic Protocols Used
  9.3.3. Most Used Equipment
9.4. Sequencing
  9.4.1. Introduction - History of the Method
  9.4.2. Basic Protocols Used
  9.4.3. Most Used Equipment
9.5. High-throughput
  9.5.1. Introduction - History of the Method
  9.5.2. Examples of Human Studies
9.6. Gene Expression - Genomics - Transcriptomics
  9.6.1. Introduction - History of the Method
  9.6.2. Microarrays
  9.6.3. Microfluidic Cards
  9.6.4. Examples of Human Studies
9.7. Omics Technologies and their Biomarkers
  9.7.1. Epigenomics
  9.7.2. Proteomics
  9.7.3. Metabolomics
  9.7.4. Metagenomics
9.8. Bioinformatics Analysis
  9.8.1. Pre- and Post-Informatics Bioinformatics Programs and Tools
  9.8.2. GO Terms, Clustering of DNA Microarras Data
  9.8.3. Functional Enrichment, GEPAS, Babelomics

Module 10. The Relationship between Intolerances/Allergies and the Microbiota

10.1. Microbiota changes in Patients on Food Exclusion Diets
  10.1.1. Eosinophilic Esophagitis (EoE)
10.2. Changes in the Microbiota in Patients with Food Exclusion Diets: Intolerance to Dairy Products (Lactose, Milk Proteins: Caseins, Albumins, Others)
  10.2.1. Lactose Intolerance
  10.2.2. Intolerant to Milk Proteins: Caseins, Albumins, etc.
  10.2.3. People Allergic to Milk
10.3. Alteration and Recovery of the Intestinal Microbiota in Patients with Gluten Intolerance and Celiac Disease
  10.3.1. Alteration of the Intestinal Microbiota in Patients with Gluten Intolerance
  10.3.2. Alteration of the Intestinal Microbiota in Celiac Patients
  10.3.3. Role of Probiotics and Prebiotics in the Recovery of the Microbiota in Gluten Intolerant and Celiacs
10.4. Microbiota and Biogenic Amines
10.5. Current Lines of Research

Module 11. Nutrition in Overweight, Obesity and their Comorbidities

11.1. Pathophysiology of Obesity
  11.1.1. Precision Diagnosis
  11.1.2. Analysis of Underlying Causes
11.2. Phenotypic Diagnosis
  11.2.1. Body Composition and Calorimetry and Impact on Personalized Treatment
11.3. Treatment Target and Hypocaloric Diet Models
11.4. Prescription of Physical Exercise in Overweight and Obesity
11.5. Psychology Associated with Weight Loss Nutrition: Psychonutrition
11.6. Comorbidities Associated with Obesity
  11.6.1. Nutritional Management in Metabolic Syndrome
  11.6.2. Insulin Resistance
  11.6.3. Type 2 Diabetes and Diabesity
11.7. Cardiovascular Risk and Nutritional Adaptations in Hypertension, Dyslipidemias and Atherosclerosis
11.8. Digestive Pathologies Associated with Obesity and Dysbiosis
11.9. Pharmacological Treatment in Obesity and Drug-Nutrient Interactions and Adaptation of the Nutritional Plan
11.10. Bariatric and Endoscopic Surgery
  11.10.1. Nutritional Adaptations

Module 12. Nutrition in Digestive Tract Pathologies

12.1. Nutrition in Oral Disorders
  12.1.1. Taste
  12.1.2. Salivation
  12.1.3. Mucositis
12.2. Nutrition in Esophagogastric Disorders
  12.2.1. Gastroesophageal Reflux
  12.2.2. Gastric Ulcers
  12.2.3. Dysphagia
12.3. Nutrition in Post-Surgical Syndromes
  12.3.1. Gastric Surgery
  12.3.2. Small Intestine
12.4. Nutrition in Bowel Function Disorders
  12.4.1. Constipation
  12.4.2. Diarrhea
12.5. Nutrition in Malabsorption Syndromes
12.6. Nutrition in Colonic Pathology
  12.6.1. Irritable Bowel
  12.6.2. Diverticulosis
12.7. Nutrition in Inflammatory Bowel Disease (IBD)
12.8. Most Frequent Food Allergies and Intolerances with Gastrointestinal Effects
12.9. Nutrition in Liver Diseases
  12.9.1. Portal Hypertension
  12.9.2. Hepatic Encephalopathy
  12.9.3. Liver Transplant
12.10. Nutrition in Biliary Diseases. Biliary Lithiasis
12.11. Nutrition in Pancreatic Diseases
  12.11.1. Acute Pancreatitis
  12.11.2. Chronic Pancreatitis

Module 13. Nutrition in Endocrine-Metabolic Diseases

13.1. Dyslipidemia and Arteriosclerosis
13.2. Diabetes Mellitus
13.3. Hypertension and Cardiovascular Disease
13.4. Obesity
  13.4.1. Etiology. Nutrigenetics and Nutrigenomics
  13.4.2. Pathophysiology of Obesity
  13.4.3. Diagnosis of the Disease and its Comorbidities
  13.4.4. Multidisciplinary Team in Obesity Treatment
  13.4.5. Dietary Treatment. Therapeutic Possibilities
  13.4.6. Pharmacological Treatment. New Drugs
  13.4.7. Psychological Treatment
    13.4.7.1. Intervention Models
    13.4.7.2. Treatment of Associated Eating Disorders
  13.4.8. Surgical Treatments
    13.4.8.1. Indications
    13.4.8.2. Techniques
    13.4.8.3. Complications
    13.4.8.4. Dietary Management
    13.4.8.5. Metabolic Surgery
  13.4.9. Endoscopic Treatments
    13.4.9.1. Indications
    13.4.9.2. Techniques
    13.4.9.3. Complications
    13.4.9.4. Patient Dietary Management
  13.4.10. Physical Activity in Obesity
    13.4.10.1. Assessment of the Patient's Functional Capacity and Activity
    13.4.10.2. Activity-based Prevention Strategies
    13.4.10.3. Intervention in the Treatment of the Disease and Associated Pathologies
  13.4.11. Update on Diet and Obesity Studies
  13.4.12. International Intervention Strategies for Obesity Control and Prevention

Module 14. Nutrition in Nervous System Pathologies

14.1. Nutrition in the Prevention of Cognitive Impairment, Dementia and Alzheimer's Disease
14.2. Nutrition and Psychoaffective Pathologies
  14.2.1. Depression
  14.2.2. Bipolar Disorder
14.3. Pathologies with Altered Eating Behavior
  14.3.1. Schizophrenia
  14.3.2. Borderline Personality Disorder
14.4. Eating Disorders
  14.4.1. Anorexia
  14.4.2. Bulimia
  14.4.3. BED
14.5. Nutrition in Degenerative Pathologies
  14.5.1. Multiple Sclerosis
  14.5.2. Amyotrophic Lateral Sclerosis
  14.5.3. Muscular Dystrophies
14.6. Nutrition in Pathologies with Uncontrolled Movement
  14.6.1. Parkinson's Disease
  14.6.2. Huntington's Disease
14.7. Nutrition in Epilepsy
14.8. Nutrition in Neuralgias
  14.8.1. Chronic Pain
14.9. Nutrition in Severe Neurological Injuries
14.10. Toxics, Bioactive Compounds, Intestinal Microbiota and their Relationship to Nervous System Diseases

Module 15. Nutrition in Kidney Diseases

15.1. Glomerular Disorders and Tubulopathies
15.2. Predialysis Chronic Renal Failure
15.3. Chronic Renal Insufficiency and Dialysis
15.4. Gout and Hyperuricemia

Module 16. Nutrition in Special Situations

16.1. Nutrition in Metabolic Stress Situations
- 16.1.1. Sepsis
- 16.1.2. Polytrauma
- 16.1.3. Burns
- 16.1.4. Transplant Recipient

16.2. Oncology Patient Nutrition
- 16.2.1. Surgical Treatment
- 16.2.2. Chemotherapy Treatment
- 16.2.3. Radiotherapy Treatment
- 16.2.4. Bone Marrow Transplant

16.3. Immune Diseases
- 16.3.1. Acquired Immunodeficiency Syndrome

Module 17. Clinical Nutrition and Hospital Dietetics

17.1. Management of Hospital Nutrition Units
- 17.1.1. Nutrition in the Hospital Setting
- 17.1.2. Food Safety in Hospitals
- 17.1.3. Hospital Kitchen Organization
- 17.1.4. Planning and Managing Hospital Diets. Dietary Code

17.2. Hospital Basal Diets
- 17.2.1. Basal Diet in Adults
- 17.2.2. Pediatric Basal Diet
- 17.2.3. Ovo-Lacto-Vegetarian and Vegan Diet
- 17.2.4. Diet Adapted to Cultural

17.3. Therapeutic Hospital Diets
- 17.3.1. Unification of Diets and Personalized Menus

17.4. Bi-Directional Drug-Nutrient Interaction

Module 18. Artificial Nutrition in Adults

18.1. Enteral Nutrition

18.2. Parenteral Nutrition

18.3. Artificial Nutrition at Home

18.4. Adapted Oral Nutrition

Module 19. Physiology of Infant Nutrition

19.1. Influence of Nutrition on Growth and Development

19.2. Nutritional Requirements in the Different Periods of Childhood

19.3. Nutritional Assessment in Children

19.4. Physical Activity Evaluation and Recommendations

19.5. Nutrition During Pregnancy and its Impact on the New-born

19.6. Current Trends in the Premature New-Born Nutrition

19.7. Nutrition in Lactating Women and its Impact on the Infant

19.8. Nutrition of New-Borns with Intrauterine Growth Delay

19.9. Breastfeeding
- 19.9.1. Human Milk as a Functional Food
- 19.9.2. Process of Milk Synthesis and Secretion
- 19.9.3. Reasons for it to be Encouraged

19.10. Human Milk Banks
- 19.10.1. Milk Bank Operation and Indications

19.11. Concept and Characteristics of the Formulas Used in Infant Feeding

19.12. The Move to a Diversified Diet. Complementary Feeding During the First Year of Life

19.13. Feeding 1–3-Year-Old Children

19.14. Feeding During the Stable Growth Phase. Schoolchild Nutrition

19.15. Adolescent Nutrition. Nutritional Risk Factors

19.16. Child and Adolescent Athlete Nutrition

19.17. Other Dietary Patterns for Children and Adolescents. Cultural, Social, and Religious Influences on Childhood Nutrition

19.18. Prevention of Childhood Nutritional Diseases. Objectives and Guidelines

Module 20. Artificial Nutrition in Pediatrics

20.1. Concept of Nutritional Therapy in Pediatrics
- 20.1.1. Evaluation of Patients in Need of Nutritional Support
- 20.1.2. Indications

20.2. General Information about Enteral and Parenteral Nutrition
- 20.2.1. Enteral Pediatric Nutrition
- 20.2.2. Parenteral Pediatric Nutrition

20.3. Dietary Products Used for Sick Children or Children with Special Needs

20.4. Implementing and Monitoring Patients with Nutritional Support
- 20.4.1. Critical Patients
- 20.4.2. Patients with Neurological Pathologies

20.5. Artificial Nutrition at Home

20.6. Nutritional Supplements to Support the Conventional Diet

20.7. Probiotics and Prebiotics in Infant Feeding

Module 21. Infant Malnutrition

21.1. Childhood Malnutrition and Undernutrition
- 21.1.1. Psychosocial Aspects
- 21.1.2. Pediatric Assessment
- 21.1.3. Treatment and Monitoring

21.2. Nutritional Anemias
- 21.2.1. Other Nutritional Anemias in Childhood

21.3. Vitamin and Trace Element Deficiencies
- 21.3.1. Vitamins
- 21.3.2. Trace Elements
- 21.3.3. Detection and Treatment

21.4. Fats in Infant Diets
- 21.4.1. Essential Fatty Acids

21.5. Childhood Obesity
- 21.5.1. Prevention
- 21.5.2. Impact of Childhood Obesity
- 21.5.3. Nutritional Treatment

Module 22. Childhood Nutrition and Pathologies

22.1. Nutrition of Children with Oral Pathologies
- 22.1.1. Major Childhood oral pathologies
- 22.1.2. Repercussions of These Alterations on the Child's Nutrition
- 22.1.3. Mechanisms to Avoid Related Malnutrition

22.2. Nutrition of Infants and Children with Gastroesophageal Reflux
- 22.2.1. Repercussions of These Alterations on the Child's Nutrition
- 22.2.2. Mechanisms to Avoid Related Malnutrition

22.3. Nutrition in Acute Diarrhea Situation
- 22.3.1. Repercussions of These Alterations on the Child's Nutrition
- 22.3.2. Mechanisms to Avoid Related Malnutrition

22.4. Nutrition in Children with Celiac Disease
- 22.4.1. Repercussions of These Alterations on the Child's Nutrition
- 22.4.2. Mechanisms to Avoid Related Malnutrition

22.5. Nutrition of the Child with Inflammatory Bowel Disease
- 22.5.1. Repercussions of These Alterations on the Child's Nutrition
- 22.5.2. Mechanisms to Avoid Related Malnutrition

22.6. Nutrition in the Child with Malabsorptive/Digestive Syndrome
- 22.6.1. Repercussions of These Alterations on the Child's Nutrition
- 22.6.2. Mechanisms to Avoid Related Malnutrition

22.7. Nutrition in Children with Constipation
- 22.7.1. Nutritional Mechanisms to Prevent Constipation
- 22.7.2. Nutritional Approaches for Treating Constipation

22.8. Nutrition in Children with Liver Disease
- 22.8.1. Repercussions of These Alterations on the Child's Nutrition
- 22.8.2. Mechanisms to Avoid Related Malnutrition
- 22.8.3. Special Diets

Module 23. Childhood Nutrition and Pathologies

23.1. Feeding Difficulties and Disorders in Children
- 23.1.1. Physiological Aspects
- 23.1.2. Psychological Aspects

23.2. Eating Disorders
- 23.2.1. Anorexia
- 23.2.2. Bulimia
- 23.2.3. Others

23.3. Inborn Errors of Metabolism
- 23.3.1. Principles for Dietary Treatment

23.4. Nutrition in Dyslipidemia
- 23.4.1. Nutritional Mechanisms to Prevent Dyslipidemias
- 23.4.2. Nutritional Mechanisms to Treat Dyslipidemias

23.5. Nutrition in the Diabetic Child
- 23.5.1. Repercussions of Diabetes in the Nutrition of the Child
- 23.5.2. Mechanisms to Avoid Related Malnutrition

23.6. Nutrition in Autistic Children
- 23.6.1. Repercussions of These Alterations on the Child's Nutrition
- 23.6.2. Mechanisms to Avoid Related Malnutrition

23.7. Nutrition in Children with Cancer
- 23.7.1. Repercussions of Disease and Treatments in the Child's Nutrition
- 23.7.2. Mechanisms to Avoid Related Malnutrition

23.8. Nutrition in Children with Chronic Pulmonary Pathology
- 23.8.1. Repercussions of These Alterations on the Child's Nutrition
- 23.8.2. Mechanisms to Avoid Related Malnutrition

23.9. Nutrition in Children with Nephropathy
- 23.9.1. Repercussions of These Alterations on the Child's Nutrition
- 23.9.2. Mechanisms to Avoid Related Malnutrition
- 23.9.3. Special Diets

23.10. Nutrition of the Child with Food Allergy and/or Intolerance
- 23.10.1. Special Diets

23.11. Childhood Nutrition and Bone Pathology
- 23.11.1. Mechanisms for Good Bone Health in Childhood

Module 24. Sports Nutrition

24.1. Physiology of Exercise

24.2. Physiological Adaptation to Different Types of Exercise

24.3. Metabolic Adaptation to Exercise. Regulation and Control

24.4. Assessing Athletes' Energy Needs and Nutritional Status

24.5. Assessing Athletes' Physical Ability

24.6. Nutrition in the Different Phases of Sports Practice
- 24.6.1. Pre-Competition
- 24.6.2. During
- 24.6.3. Post-Competition

24.7. Hydration
- 24.7.1. Regulation and Needs
- 24.7.2. Types of Beverages

24.8. Dietary Planning Adapted to Different Sports

24.9. BORRAR
- 24.9.1. BORRAR

24.10. Nutrition in Sports Injury Recovery

24.11. Psychological Disorders Related to Practicing Sport
- 24.11.1. Eating Disorders: Vigorexia, Orthorexia, Anorexia
- 24.11.2. Fatigue Caused by Overtraining
- 24.11.3. The Female Athlete Triad

24.12. The Role of the Coach in Sports Performance

Module 25. Assessment of Nutritional Status and Calculation of Personalized Nutritional Plans, Recommendations and Monitoring

25.1. Medical History and Background
- 25.1.1. Individual Variables Affecting Nutritional Plan Response.

25.2. Anthropometry and Body Composition

25.3. Assessment of Eating Habits

25.3.1 Nutritional Assessment of Food Consumption

25.4. Interdisciplinary Team and Therapeutic Circuits

25.5. Calculation of Energy Intake

25.6. Calculation of Recommended Macro- and Micronutrient Intakes

25.7. Quantity and Frequency of Food Consumption Recommendations
25.7.1 Feeding Models
25.7.2 Planning
25.7.3 Distribution of Daily Feedings
25.8. Diet Planning Models
25.8.1. Weekly Menus
25.8.2. Daily Intake
25.8.3. Methodology by Food Exchanges
25.9. Hospital Nutrition
25.9.1. Dietary Models
25.9.2. Decision Algorithms
25.10. Educational
25.10.1. Psychological Aspects
25.10.2. Maintenance of Feeding Habits
25.10.3. Discharge Recommendations

Module 26. Nutritional Consultation

26.1. How to Carry Out a Nutritional Consultation
26.1.1. Analysis of the Market and Competition
26.1.2. Clients
26.1.3. Marketing. Social Networks
26.2. Psychology and Nutrition
26.2.1. Psychosocial Factors Affecting Eating Behavior
26.2.2. Interview Techniques
26.2.3. Dietary Advice.
26.2.4. Stress Control
26.2.5. Child and Adult Nutrition Education

Module 27. Probiotics, Prebiotics, Microbiota, and Health

27.1. Probiotics
27.2. Prebiotics
27.3. Clinical Applications of Probiotics and Prebiotics in Gastroenterology
27.4. Clinical Applications of Endocrinology and Cardiovascular Disorders
27.5. Clinical Applications of Probiotics and Prebiotics in Urology
27.6. Clinical Applications of Probiotics and Prebiotics in Gynecology
27.7. Clinical Applications of Probiotics and Prebiotics in Immunology
27.8. Clinical Applications of Probiotics and Prebiotics in Nutritional Diseases
27.9. Clinical Applications of Probiotics and Prebiotics in Neurological Diseases
27.10. Clinical Applications of Probiotics and Prebiotics in Critically Ill Patients
27.11. Dairy Products as a Natural Source of Probiotics and Prebiotics

Module 28. Nutrition for Health, Equity and Sustainability

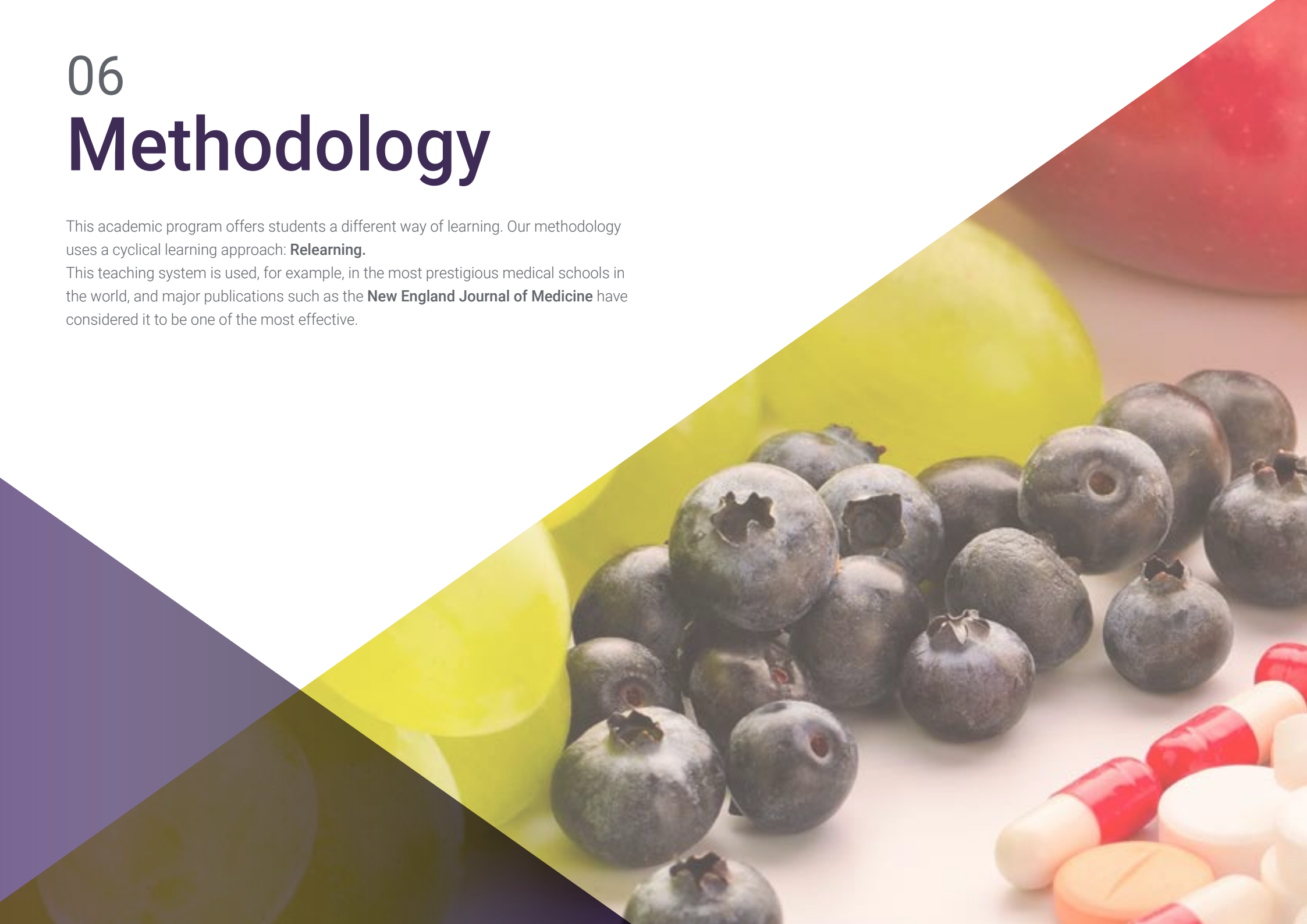
28.1. Sustainable Nutrition, Food Variables Influencing the Ecological Footprint.
  28.1.1. Carbon Footprint
  28.1.2. Water Footprint
28.2. Food Waste as an Individual Problem and as a Problem Associated with the Food Industry
28.3. Biodiversity Loss at Different Levels and its Impact on Human Health: Microbiota
28.4. Toxics and Xenobiotics in Food and their Effects on Health
28.5. Current Food Legislation
  28.5.1. Labeling, Additives and Regulatory Proposals in Marketing and Advertising
28.6. Nutrition and Endocrine Disruptors
28.7. The Global Obesity and Malnutrition Epidemic, Associated with Inequity: "A Planet of Fat and Hungry People".
28.8. Feeding in Childhood and Youth and Habits Acquisition in Adulthood
28.8.1. Ultraprocessed Foods and Beverages other than Water: A Population Problem
28.9. Food Industry, Marketing, Advertising, Social Networks and their Influence on Food Choice
28.10. Healthy, Sustainable and Non-Toxic Food Recommendations: Policy

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH, nutritionists can experience a way of learning that is shaking the foundations of traditional universities around the world.

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional nutritional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

1. Nutritionists who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.

2. Learning is solidly translated into practical skills that allow the nutritionist to better integrate knowledge into clinical practice.

3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.

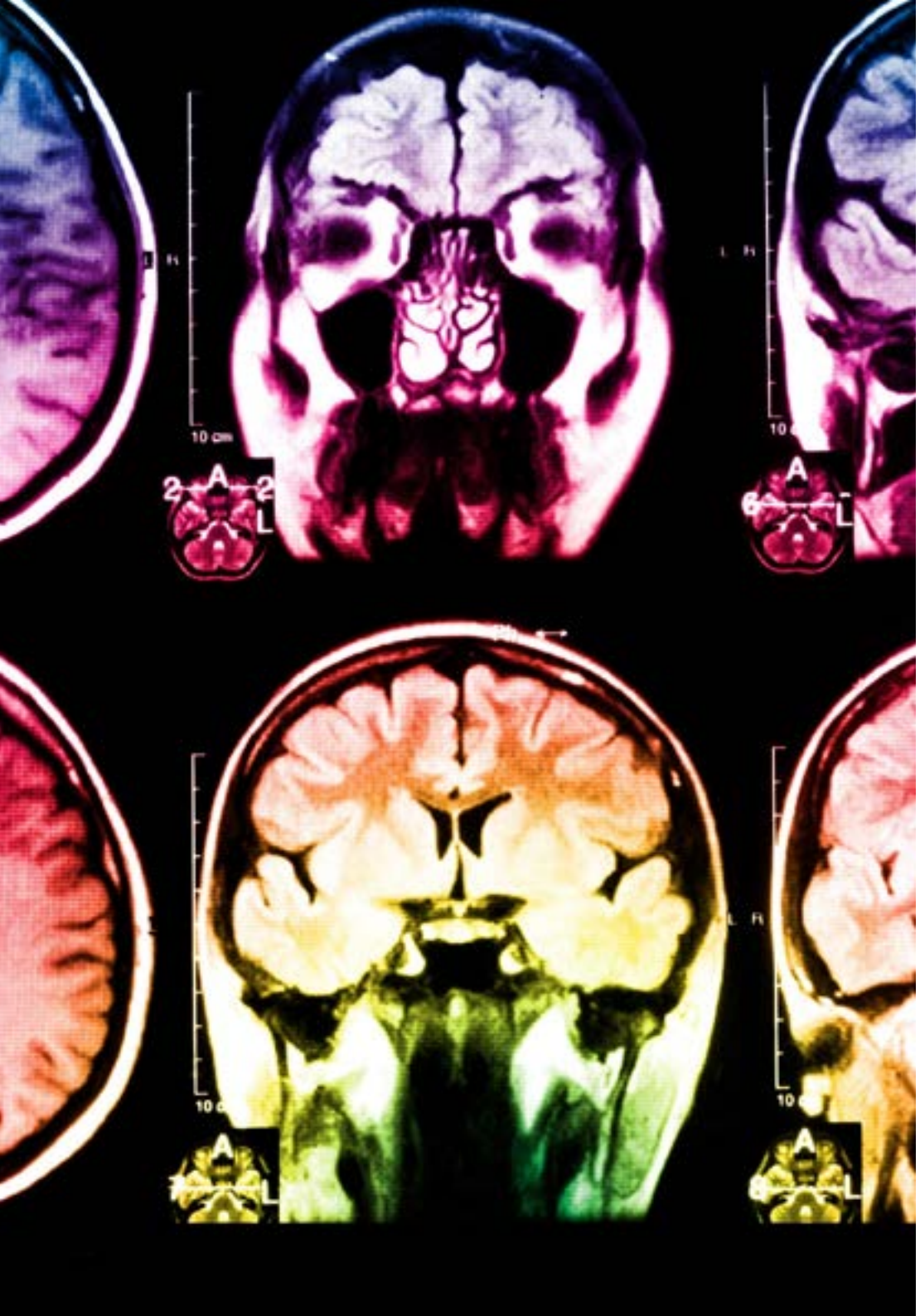
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

The nutritionist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 45,000 nutritionists have been trained with unprecedented success in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Nutrition Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.

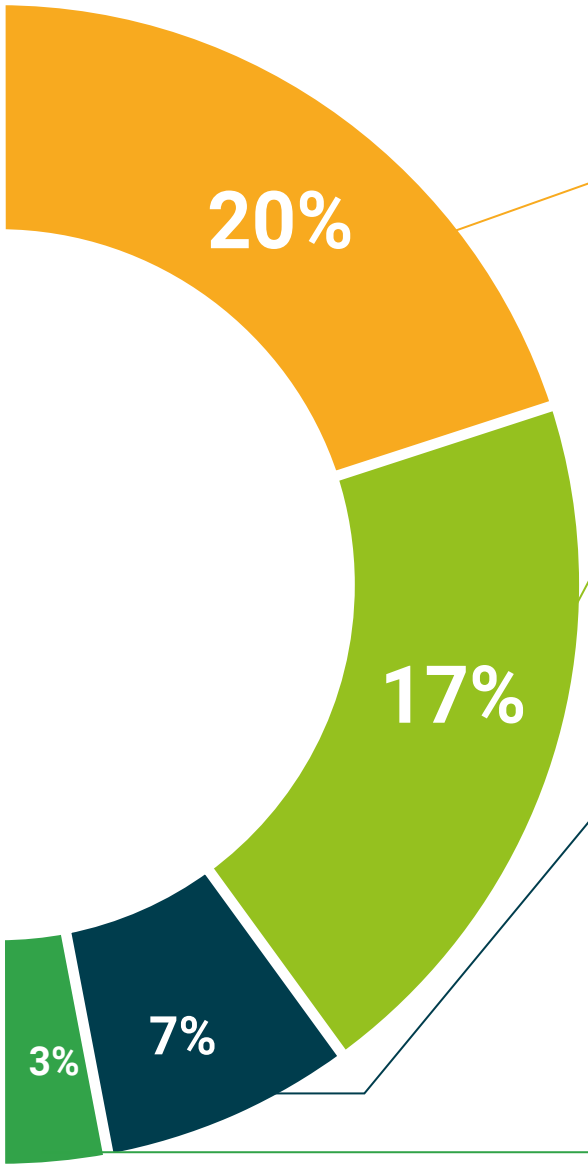
Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.



Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

07

Certificate

The Advanced Master's Degree in Clinical Nutrition guarantees students, in addition to the most rigorous and up-to-date education, access to an Advanced Master's Degree issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This private qualification will allow you to obtain a **Advanced Master's Degree diploma in Clinical Nutrition** endorsed by **TECH Global University,** the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ***(official bulletin)***. Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Advanced Master's Degree in Clinical Nutrition**

Modality: **Online**

Duration: **2 years**

Accreditation: **120 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Advanced Master's Degree in Clinical Nutrition

This is a private qualification of 3,600 hours of duration equivalent to 120 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Advanced Master's Degree in Clinical Nutrition

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	New Developments in Food	4	CO
1º	Current Trends in Nutrition	4	CO
1º	Nutrigenetics I	4	CO
1º	Nutrigenetics II. Key Polymorphisms	4	CO
1º	Nutrigenetics III	4	CO
1º	Nutrigenomics	4	CO
1º	Metabolomics-Proteomics	4	CO
1º	Laboratory Techniques for Nutritional Genomics	4	CO
1º	Epigenetics	4	CO
1º	The Relationship between Intolerances/Allergies and the Microbiota	4	CO
1º	Nutrition in Overweight, Obesity and their Comorbidities	5	CO
1º	Nutrition in Digestive Tract Pathologies	5	CO
1º	Nutrition in Endocrine-Metabolic Diseases	5	CO
1º	Nutrition in Nervous System Pathologies	5	CO
1º	Nutrition in Kidney Diseases	4	CO
1º	Nutrition in Special Situations	4	CO
1º	Clinical Nutrition and Hospital Dietetics	4	CO
1º	Artificial Nutrition in Adults	4	CO
1º	Physiology of Infant Nutrition	4	CO
1º	Artificial Nutrition in Pediatrics	4	CO
1º	Infant Malnutrition	4	CO
1º	Childhood Nutrition and Pathologies	4	CO
1º	Childhood Nutrition and Pathologies	4	CO
1º	Sports Nutrition	4	CO
1º	Assessment of Nutritional Status and Calculation of Personalized Nutritional Plans, Recommendations and Monitoring	5	CO
1º	Nutritional Consultation	5	CO
1º	Probiotics, Prebiotics, Microbiota, and Health	5	CO
1º	Nutrition for Health, Equity and Sustainability	5	CO

Dr. Pedro Navarro Illana
Dean

tech global university

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

tech global university

Advanced Master's Degree
Clinical Nutrition

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Global University**
- Accreditation: **120 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Advanced Master's Degree
Clinical Nutrition

tech global university